

Section 3 – Improving Management of Asthma in Child Care Settings

This is a collaborative report coauthored by the Evaluation Team at Group Health Community Foundation, with others involved in the process, including: the AAA Project Director, Co-Director, and Project Manager/KCAF Coordinator.

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Summary

Many children in the Allies Against Asthma (AAA) target area have working parents and spend significant time in child care or recreational activities. Therefore, a priority for AAA was to improve the asthma management skills of child care providers. AAA and Environmental Protection Agency (EPA) funds supported the Asthma and Allergy Foundation of America (Washington chapter) in hosting trainings for providers serving children from the AAA target neighborhoods through its “Asthma and Allergy Essentials for Child Care Providers” program.

Key accomplishments of the AAFA-WA child care training included:

- **Reaching a large number of providers.** Between May, 2001 and October, 2004 there were 40 classes held, with a total of 878 providers trained. The classes are marketed effectively as evidenced by the large numbers of providers who voluntarily participated.
- **Offering courses and presenters who were consistently positively received.** Participant evaluations showed that nearly 100% believed that course objectives were met, over 90% rated the presenters as either Good or Excellent, and 99% said they would recommend the course to others.
- **Increasing the asthma-related knowledge of child care providers.** Pre-post knowledge test results showed an increase in knowledge about asthma.
- **Introducing a Spanish version of the class in 2004.** AAFA-WA provided three Spanish classes for in-home providers. (link to <http://www.aafawa.org/> for curriculum). These classes provided new learning opportunities to a population that typically cannot access larger conferences.
- **Obtaining STARS accreditation.** AAFA-WA obtained STARS approval for the training in response to providers’ requests that the training count towards their annual accreditation.

Description of Child Care Activities

Many children in the AAA target area have working parents and spend significant time in child care or recreational activities. During the AAA community needs assessment, parents and child care staff requested increased education for child care providers. Parents worried about their children being with caretakers who lack adequate education about asthma and its management. Child care providers expressed anxiety about their level of responsibility given their limited knowledge. The providers wanted training; preferably something that would meet the requirement for STARS accreditation.

AAA and Environmental Protection Agency (EPA) funds supported the Asthma and Allergy Foundation of Washington (AAFA-WA, www.aafawa.org/) to host trainings for providers serving children from the AAA target neighborhoods through its “Asthma and Allergy Essentials for Child Care Providers” program. AAFA-WA offered the classes regularly and providers received STARS continuing education credits for attending.

In 2003 AAFA-WA and AAA received a grant from the EPA to provide home environmental assessments for in-home child care providers participating in the classes. The AAA and Healthy Homes II Community Health Workers conducted these assessments. This activity built on the partnering organizations’ existing resources; the AAFA-WA child care classes, AAA’s home environmental survey tool, and Community Health Workers from the AAA and Healthy Homes II projects.

Steps to Health-King County will fund ten *Essentials* classes for child care providers in the AAA target area in 2005. AAFA-WA will also offer classes in other parts of Washington, Idaho, and Oregon with support from EPA, which funded development of the *Essentials* course. As of October 1, 2004, there are no resources to sustain provision of the home environmental assessment component.

Measuring Progress in Child Care Activities

Progress measures for the child care intervention include both process indicators (e.g., number of classes held) and outcome indicators (e.g., changes implemented as a result of the training).

Process Indicators

The primary process indicators for the child care intervention are the number of classes held and providers trained, satisfaction of participants with the training and number of environmental assessments conducted.

Classes held/Providers trained

- Between May, 2001 and October, 2004 there were 40 classes held, with a total of 878 providers trained.

Number of children with asthma cared for by these providers

- 1-2 children: 36% of participating providers
- 3-4 children: 14% of providers
- 5 or more children: 13% of providers
- No children with asthma: 37% of providers

Environmental assessments

- 40 child care providers received home environmental assessments, education and supplies from Community Health Workers in 2004.

Table 1 shows overall ratings of the training classes by participants responding to a survey following the training (N=596). Roughly 70% of all participants rated as “excellent” the presenter’s skills in the following: 1) knowledge of the subject; 2) ability to hold their interest; and 3) the way they responded to questions. Nearly 80% of participants liked that they learned new information.

Table 1. Participant Evaluation of Child care Training Classes

N	596
<u>Rate presenter: Knowledge of subject</u>	
Fair	1%
Average	3%
Good	25%
Excellent	71%
<u>Rate presenter: Kept my interest</u>	
Fair	1%
Average	6%
Good	27%
Excellent	66%
<u>Rate presenter: Responded to questions</u>	
Fair	1%
Average	3%
Good	23%
Excellent	73%
<u>Things liked about the course</u>	
Learned new information	78%
Information packet	64%
Open discussion	51%
Practice with equipment	31%

Course evaluations included a section for open-ended comments; the following are examples of the many positive comments from participants.

Excellent class, demonstrations, instructor very professional, courteous, and knowledgeable.

This class gave me a better understanding of asthma. It gives me more peace.

It is a knowledgeable course. I recommend it is a good for all family members.

I really liked the child care asthma plan with action card.

In 30 years of classes, this was one of the best classes.

Give this class frequently.

Outcome Indicators

Outcome indicators include changes made in child care settings to improve asthma management and increases in knowledge. Table 2 gives participant self-ratings of both their degree of comfort in caring for children with asthma and changes they said they were likely to make as a result of attending the class.

Ninety-five percent of participants said they were either very comfortable (45%) or comfortable (50%) caring for children with asthma after completing the course (no pre-training survey was done so their comfort level before the class is unknown). The most commonly mentioned changes that participants said they would implement immediately were washing or eliminating stuffed toys (49%), dusting/cleaning the environment more frequently (43%) and vacuuming frequently (38%). These percentages represent intentions only; no follow-up was conducted to assess whether the changes were actually made.

Table 2. Changes Resulting from Child Care Training Classes

N	596
<u>How comfortable caring for children w/ asthma?</u>	
Very comfortable	40%
Comfortable	55%
Uncomfortable	3%
Very uncomfortable	2%
<u>Changes to be implemented immediately</u>	
No smoking	31%
Use pillow/mattress covers	30%
Wash sheets weekly hot water	34%
Wash/eliminate stuffed toys	49%
No pets	26%
Eliminate mold	31%
Dust/clean frequently	43%
Remove carpet	13%
Clean/change filters monthly	27%
Vacuum frequently	38%
Eliminate cockroaches	19%
Use airtight food containers	23%
Cover trash cans	31%
Avoid play outside on code-red day	34%
No sprays/perfumes	39%
Other	8%

Table 3 shows pre/post changes in knowledge before and after completing the course for 19 questions. On average participants answered between one and two (1.6) more questions correctly after completing the class. Test questions where there were large increases in knowledge included: asthma can not be cured (T) (69% to 84%); droppings of cockroaches can trigger asthma (T) (54% to 95%); a peak flow meter monitors how lungs are working (T) (62% to 92%); and some asthma medicines are preventive (T) (71% to 88%). All but 4 of the 19 pre/post comparisons were statistically significant.

Table 3. Child Care Provider Education -- Pre/Post Changes in Knowledge

<i>Question (correct answer)</i>	<i>Pre</i>	<i>Post</i>	<i>P-value¹</i>
N	573	531	
Total number of correct answers (out of 19)	14.3	15.9	<.001
Asthma can not be cured (T)	69%	84%	<.001
Episodes occur suddenly and w/o warning (F)	29%	38%	.003
Many different things can bring on episodes (T)	95%	97%	.059
You can catch asthma like a cold (F)	82%	83%	.638
Children and adults with asthma should not exercise (F)	90%	88%	.059
Droppings of cockroaches can trigger asthma (T)	54%	95%	<.001
Tobacco smoke can cause an episode (T)	94%	98%	.001
Colds and flu can set off episode (T)	84%	91%	.001
Many children have asthma and allergies (T)	90%	95%	.001
A peak flow meter monitors how lungs are working (T)	62%	92%	<.001
A child is not having an episode unless they are wheezing (F)	76%	85%	<.001
Asthma is a psychological illness (F)	86%	90%	.057
Small amount of peanuts OK with allergic people (F)	84%	82%	.274
Gloves, etc are potential latex sources (T)	87%	94%	<.001
Some asthma medicines are preventative (T)	71%	88%	<.001
High pollen days can cause episode (T)	90%	97%	<.001
Reactions to food allergies can be life threatening (T)	94%	98%	<.001
Environmental changes can prevent episodes (T)	88%	94%	<.001
Children allergic to cat/dog dander should avoid those animals (T)	90%	96%	<.001

Notes:

1 - p-value for individual-level paired t-test comparing pre/post. (Pre/post figures include all respondents, p-value is only for those with matched pre/post).

Lessons Learned

There were several lessons learned from the child care training program that may prove useful for other, similar programs in the future:

- Membership in an asthma coalition can enhance child care training programs.**
 The child care training benefited in at least three ways from being connected with the KCAF. First the training program developed linkages with AAFA-WA, and the AAA and Healthy Homes II Community Health Workers (CHWs). In addition, instructors started informing child care providers that they could refer clients to CHWs. These linkages are examples of integrating services. Second, KCAF membership allowed AAFA-WA to tap into experts in the community who can assist with the training. Third, membership in the coalition allowed AAFA-WA to receive the local EPA grant to provide both the classes and the in-home environmental evaluations.

- **Class timing is important.** Classes were held in the evening after work, and although this time fits best with providers' schedules, it means that providers were often tired. Learning and absorbing information becomes more challenging. Instructors should explore ways of keeping people alert such as making the class interactive, providing food, and taking frequent breaks.
- **Language barriers need to be addressed.** English is a second language for many providers, and some of the class vocabulary (e.g., physiology, medications) is difficult to explain and for participants to comprehend. During class, participants will attempt to explain to one another what the terms mean, which may distract others who are listening to the instructor. Options such as translators or offering separate classes for those with different levels of English proficiency could be explored.
- **Quality instructors are critical.** AAFA-WA instructors received lots of very positive feedback and contributed a great deal to the success of the program.
- **Obtaining STARS accreditation provided an incentive** for child care providers to participate in the trainings.